

REMARKS

By this amendment, claims 1-16 have been amended in minor fashion to correct typographical and grammatical errors. New claim 18 has been added; no new matter has been added. Claims 1-18 are pending in the application.

Claims 1-3, 5-9 and 11-17 stand rejected under 35 U.S.C. § 103(a) as being anticipated by Fukutomi (US 2002/0091926) in view of Haggerty (US 6,331,983), and further in view of Dobbins (US 5,684,800). This rejection is respectfully traversed. None of Fukutomi, Haggerty, nor Dobbins, even when considered in combination, teaches or suggests all of the limitations of independent claims 1 or 7.

Claim 1 recites, *inter alia*, “the multicast router and the authentication server adopting a Client-server structure by which the authentication server authenticates identification of the host to join in a multicast group with information inputted through the interface provided by the portal server” (emphasis added). Claim 7 recites similar limitations for a method for implementing a controlled multicast. Applicants respectfully submit that Fukutomi, Haggerty, and Dobbins, even when combined, fail to teach or suggest at least these limitations.

Specifically, ¶ [0083] of Fukutomi teaches that, “an authentication control section 32c authenticating a user based on the transmitting end address and the group address in the received RADIUS message” (emphasis added). Thus, the authentication was based on the transmission end address and the group address.

Furthermore, based on ¶¶ [0042] and [0130] of Fukutomi, the transmission end address was the IP address of the host. Thus, it can be seen that in Fukutomi, a user was authenticated

based on the IP address of the host and the group message, instead of being authenticated based on the identification, e.g., the ID, of the host as in claim 1 of the application.

As is known to a person of ordinary skill in the art, the ID of a host is generally fixed. However, IP address of a host may be dynamically changed. Thus, as opposed to Fukutomi, the claimed invention allows a host to be conveniently and quickly authenticated based on the ID thereof.

Haggerty teaches that, “[i]f a host wishes to join a multicast session, the host will notify its local switch of this desire. The local switch then checks its connection table for an entry identifying the designated group address which the local host wishes to join, and if there is an entry, adds the access port on which the local host is connected as an outport for the connection table entry. If there is no entry, the local switch composes and sends a join group message to the other switches in the network, the join group message containing the designated group address and the local switch address.” Col. 8, ln. 15-25.

Based on the above and Haggerty, col. 8, ln. 26-37, it can be seen that if there is an entry, the local switch directly adds access port of the local host as an outport for the connection port entry. If there is no entry, the local switch composes and sends a join group message to the other switches to ask for receiving data of the multicast session which the local host wishes to join. Further, no authentication process is involved in the above two cases.

Arguendo, even if the combination of Fukutomi and Haggerty may only authenticate the first host which wishes to join a multicast session with the IP address of the host and the group message, subsequent users wishing to join the multicast session may directly join the multicast session without being authenticated.

Taking the arguments above into consideration, it can be seen that neither Fukutomi nor the combination of Fukutomi and Haggerty discloses, teaches, or suggests all of the features of claims 1 or 7. Furthermore, Applicants respectfully submit that the CE router in Fukutomi fail to disclose or teach the Ethernet switch in claims 1 and 7 of the application.

If the Ethernet switch in claim 1 of the application is disclosed or taught by the CE router in Fukutomi (which it is not), and subsequently, functions of the Ethernet switch in claims 1 and 7 of the application are considered equivalent to that of the CE router in Fukutomi (which they are not), Fukutomi ¶ [0079] teaches that, “the CE router consists of a LAN interface, ..., an IGMP proxy processing section 22c...., The IGMP Proxy processing section 22c acts as an IGMP proxy and changes a transmitting end address from the IP address of the user PC 20 to the IP address of the CE router 22 when the packet is relayed from the user PC 20.” Accordingly, it can be seen that one function of the CE router in Fukutomi is to change a transmitting end address from the IP address of the user PC 20 to the IP address of the CE router 22. Therefore, the above-mentioned IP address of the CE router 22 actually refers to the IP address of the port in the CE router 22 which receives the packet from user PC 20.

A person of ordinary skill in the art would understand that there is no IP address for each port in the Ethernet switch, e.g., a generalized switch in the art. If using the Ethernet switch as a substitute for the CE router in Fukutomi, the Ethernet switch in Fukutomi cannot work. For example, the IGMP Proxy processing section 22c cannot act in the Ethernet switch at all. Thus, such a change would render Fukutomi unsatisfactory for its intended purpose, in violation of M.P.E.P. § 2143.01(V). In view of above, it can be seen that the claimed Ethernet switch is not disclosed or taught by the CE router in Fukutomi.

Moreover, the feature of “the multicast router records a User ID and a vlan ID corresponding to the User ID of the authenticated host and then distributes control commands according to results of the authentication to control multicast forwarding operations of the Ethernet switch” in claim 1 of the application cannot be disclosed or taught by the combination of Fukutomi and Haggerty. Claim 7 recites similar limitations.

The Office Action asserts at page 15 that ¶¶ [0127]-[0132] of Fukutomi and Haggerty, Col. 8, ln. 15-25, Figure 17 disclose or teach the above elements in claims 1 and 7 of the application. Applicants respectfully disagree.

After carefully reviewing contents in paragraphs ¶¶ [0127]-[0132] of Fukutomi, Applicants cannot find the “multicast commands” mentioned in the second paragraph on page 15 of the Office Action. Fukutomi teaches only that the user authentication server, the PE router, or the CE router may be adopted to determine whether the user PC is authenticated to be accepted to participate, however processes which should be performed after the authentication are failed to be mentioned.

Moreover, from ¶¶ [0127]-[0132] of Fukutomi and Haggerty, Col. 8, ln. 15-25, Figure 17, Applicants only finds a “join group message” therein. Besides, taking arguments above regarding Haggerty into consideration, it can be seen that the “join group message” is sent by the local switch to other switches, which is used to ask for data of a multicast session a host wishes to participate.

However, based on the above features of claims 1 and 7, it can be seen that the control command is sent from the multicast router to the Ethernet switch, which is used to control multicast forwarding operations of the Ethernet switch.

Thus, it can be seen that neither the sender nor the functions of the “join group message” in Haggerty is equivalent to that of the control command in claim 1 of the application. The Applicants respectfully submits that the “join group message” is not equivalent to the control command.

It can be seen that the elements in claims 1 and 7 mentioned above cannot be disclosed or taught by the combination of Fukutomi and Haggerty.

Additionally, as argued above, it can be seen that the elements “the multicast router records a User ID and a vlan ID corresponding to the User ID of the authenticated host and then distributes control commands according to results of the authentication to control multicast forwarding operations of the Ethernet switch” describing functions of the multicast router in claim 1 of the application cannot be disclosed or taught by the combination of Fukutomi and Haggerty, not to mention the multicast router in claim 1 or the method of claim 7 may be disclosed or taught by the PE router in Fukutomi.

Thus, the multicast router in claim 1, and the method of claim 7 cannot be disclosed or taught by the PE router in Fukutomi.

Since Dobbins cannot make up the deficiencies of Fukutomi and Haggerty, claims 1 and 7 of the application cannot be disclosed or taught by the combination of Fukutomi, Haggerty and Dobbins.

Claims 1 and 7 provide effective technical means for authorization when a user wishes to join in a multicast group, such that only the authorized user can join in the multicast group. Meanwhile, the multicast router can make the active and decisive control on the multicast

forwarding function of the layer 2 switch, and distribute its control policy to the Ethernet switch, which can preferably solve the controlled problems in the IP multicast service.

Since the combination of Fukutomi, Haggerty, and Dobbins cannot disclose or teach claim 1 of the application, the above advantages cannot be achieved.

Since Fukutomi, Haggerty, and Dobbins do not teach or suggest all of the limitations of claims 1 and 7, claims 1 and 7 are not obvious over the cited combination. Claims 2-3, 5-6, 8-9, and 11-17 depend, respectively, from independent claims 1 and 7, and are patentable at least for the reasons mentioned above, and on their own merits. Applicants respectfully request that the 35 U.S.C. § 103(a) rejection of claims 1-3, 5-9, and 11-17 be withdrawn and the claims allowed.

The statement that claims 4 and 10 contain allowable subject matter is gratefully acknowledged. Claims 4 and 10 stand objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claims and any intervening claims. Claims 4 and 10 depend, respectively, from independent claims 1 and 7, and are allowable for at least the reasons set forth above, and on their own merits. New claim 18 includes subject matter from objected-to claim 10.

Applicants respectfully request that this Amendment be entered and the claims indicated allowable. Any additional fee believed necessary for the consideration of this response and to prevent abandonment of this application is hereby authorized to be charged to Deposit Account No. 50-2036, Attorney Docket 56815.200.

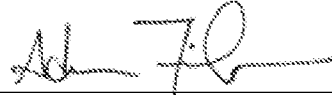
In view of the foregoing, reconsideration and allowance of the application are believed in order. Such action is earnestly solicited.

Should the Examiner believe that a telephone conference would expedite issuance of the application, the Examiner is respectfully invited to telephone the undersigned attorney at (202) 861-1606.

June 4, 2009

Respectfully submitted,

Baker & Hostetler LLP

A handwritten signature in black ink, appearing to read 'AL 70', is written over a horizontal line.

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